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# HANDBOOK

OF

## Calistoga Springs

OR, *LITTLE GEYSERS.*

—ITS—

MINERAL WATERS, CLIMATE, AMUSEMENTS,  
BATHS, DRIVES, SCENERY,

THE CELEBRATED

*Great Geysers and Petrified Forest,*

—AND THE—

CLEAR LAKE COUNTRY,

*WITH MAP AND ILLUSTRATIONS.*

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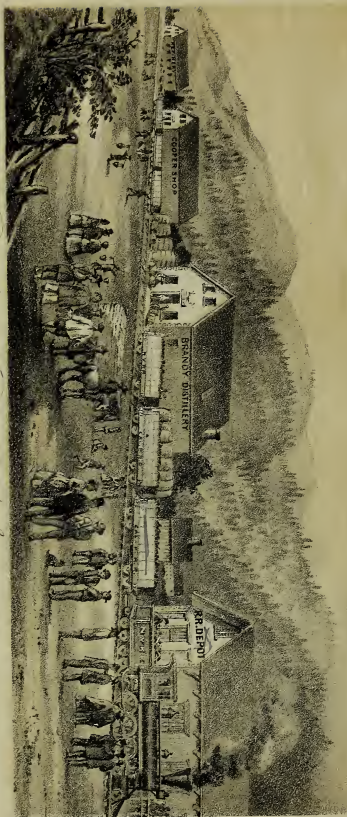








*Railroad Depot, Vicksburg*



# Calistoga Springs,

(OR, LITTLE GEYSERS.)

## *“The Saratoga of the Pacific.”*

It seems hardly possible that the tourist, who this morning was wrapping his cloak about him as a protection against the raw, searching, ocean gales of San Francisco, should be luxuriating at noon in the sunny warmth of Calistoga, in the secluded interior, under the picturesque heights of the Coast Range; and, after a journey of four hours from the city, be seeking the grateful coolness of the woods, and courting the mountain breezes. But one can change his climate quickly and easily in California. Those time and space annihilators—steamboats and railroads—have worked the change; and a marvellous one it is; for the difference in the effect upon the skin between this genial atmosphere and the harsh winds of the sea-coast is like that distinguishing “soft” from “hard” water in washing. Commend us then to Calistoga Springs for all that is enjoyable in climate, for here, the summer long, the thermometer marks about 50 degrees in the night, 70 in the morning, and 86 at high noon. If one had the choosing of his own rates of temperature, he could scarcely expect to improve it. From San Francisco the passage is a pleasure trip—all too brief in its succession of pleasant surprises—a swift transit by steamer through the chain of inland bays extending northward, and a railroad ride of forty-two miles up the grand and picturesque Napa Valley, waving with orchards, vineyards and grain-fields, the view bounded in all directions by romantic mountain scenery. It is the garden of California.

Aside from the delicious climate of the valley, its teeming soil and unrivalled beauty, its great attraction is the Hot Sulphur Springs of Calistoga, situated in its northern extremity. The accompanying map denotes the route from San Francisco with sufficient accuracy. Of these springs there are upwards of a hundred within an area of about sixty acres. They hold in solution white sulphur, iron and magnesia. Unlike most of the natural treasures of California they are no new discovery, but have been from time immemorial the resort of the Indians from far and near. The march of civilization has terminated the reign of Lo in this vicinity, excepting a solitary Rancheria, half a mile to the northward of the Springs. Tradition represents them as coming to Calistoga by hundreds in former times, and sinking themselves to the chin enveloped in the warm black ooze, after the manner of the German mud baths. The cures effected by this primitive process are justly celebrated, and to this day, some of the native Spanish families prefer this method of utilizing these medicinal waters, to the fashionable bathing rooms of modern invention, albeit there is no lack of these elegant conveniences at Calistoga. Here, in a seclusion as profound and silent as at the creation, successive aboriginal generations resorted with the faith and instincts of their simple natures. Many acres of the Spring-land to the southward of the present hotel and cottages, remain in their original condition; as seen by the illustration; verdant fields stretch away to the eastward and westward to the well rounded foot-hills, nestling under the shaggy mountains that encompass the valley on either side; their velvet-green turf relieving the eye from the glistening of the sunlight. But in winter when a slight frost tips the glades with silver, the boiling springs send up clouds of vapor as from a hundred steam engines; these, whirled aloft by the morning breeze and tending towards Saddle Mountain, remain a feature of the landscape until the ascending sun restores a summer temperature.

### **A Delightful Climate.**

The scenery of the upper end of Napa Valley is unsurpassed in the State, particularly at Calistoga where the plain narrows and the mountains approaching each other assume wilder, and more rugged and precipitous forms. Calistoga is a valley of itself. With



Primitive Landscape





a climate rivaling the most celebrated localities of Italy or the south of France, and mineral springs unsurpassed for medicinal qualities, this region must ever be the resort of tourists and invalids attracted by the purity of the atmosphere, and the beauty of the scenery, uniting the grandeur of the lofty summits of the coast range, with the pastoral features of the most fertile and attractive farming country.

Neither the oppressive heats of the more southern counties nor the ice and snows of the more northern, nor the boisterous summer gales of the California sea coast, are known at this favored watering place, the ocean winds being tempered and softened by their passage across the country some forty miles, while the intervening mountain ranges form a protection from the cold fogs drifting in from seaward.

Were it not somewhat aside from the immediate purpose of these pages, innumerable instances might be cited of invalids who have visited this watering place and after a short sojourn have departed in perfect health—appetite, spirits, vigor, and mental and bodily activity fully restored. Whether this was due to the continual out-door exercise, the inestimable “sun baths,” (elsewhere referred to), the purity of the atmosphere or the medicinal properties of the waters, the positive results remain, and attest to the efficacy of Calistoga.

### **Scenery and Foliage.**

Groves of magnificent oaks wave their branches grandly over the rustling grain fields, with all the stateliness of an English park, while the hillsides are clothed to their tops, with a noble growth of redwood, firs, madroña and manzanita. The fields and dells in the spring time and summer are carpeted with a wealth of wild flowers of every hue, and loading the air with fragrance. The eye never wearies with the varied features of nature, nor the mind in contemplating their beauty. Such picturesque mountains surmounted by the monarch of the coast range—Mount St. Helena, towering aloft and standing out in colossal proportions against the clear blue sky; such an expanse of highly cultivated fields; such a rich variety of foliage! A refreshing breeze fans gently down the valley during the day. All is elastic, health-giving invigorating. The stray detached masses of

fog which occasionally sweep up into the lower part of Napa Valley, across the hills, have never been known to invade the purity of this upland atmosphere. Sometimes on a cool morning long lines of vapor hang in fantastic wreaths over the hot springs, but quickly dissipate before the rising sun. It is a scene of romantic beauty and rural seclusion—sunny landscape and glowing wood-crowned mountain, sharply penciled against the azure heavens and blending in ever changing aspects, to portray which, would demand the genius of a Claude.

### **Mount St. Helena.**

Two miles northwesterly from the Springs, the Saddle Mountain Range abruptly terminates in the aspiring dome of Mount St. Helena. Local geologists assert that at some period in the world's history it has been a volcano—a conclusion which is somewhat favored by its peculiarly rounded summit, and its proximity to the sulphurous waters of Calistoga and the Great Geysers. The sulphur and other minerals, volcanic rock and loose fragments of obsidian, pumice and lava, and the configuration of the hills in this region, indicate former and not very remote volcanic action. Smart earthquake shocks, accompanied by ominous subterranean rumblings, not extending throughout the State, but confined to Calistoga and Clear Lake valleys, and the region immediately surrounding Mount St. Helena, have been felt. A good saddle road leads to the summit, whence at an elevation of four thousand three hundred and sixty feet, the widespread landscape well repays the making of the ascent. The great basin of California lying between the Sierra Nevada and the Coast range, extends like a vast panorama. The winding courses of the Sacramento and the San Joaquin rivers; the summits of distant isolated peaks, including Lassen's Butte, Uncle Sam, Mount Shasta, Mount Crater and other northern mountains, among the loftiest on the continent, may be seen in the direction of Oregon, standing like sentinels over the fair valleys beneath; the snow-clad crests of the Sierras forming a white escarpment athwart the eastern sky; the great bay extending inland from the Golden Gate; San Francisco and its adjacent towns gleaming in the distance like diamonds in a setting of emerald; the farming region beyond; and, westward, the mighty ocean, vast and illimitable—a line of deep blue on the horizon, suggestive of boundless space and



W. H. Holman from 'Culinary'



the strange Asiatic countries that line its farther shore. A telescope is being constructed to be located on the summit for the accommodation of visitors.

### **Early Russian Settlers.**

Around the base of St. Helena lie the finest agricultural districts of the State, including the fertile Clear Lake Country, Napa, Beryessa, Pope, Knight's, Leconoma, Cobb, Coyote, Russian River, and other great farming valleys, the last-named so called, from the circumstance that the Russians in former times, unable to cultivate their cold Arctic regions, (our present Alaska), sailed hither by permission of the Spanish Government, to raise the wheat they needed for their colonists; and located a trading and agricultural post at Bodega, where they erected a fort. It is a singular fact, that just before the cession of these possessions to the United States, after the Mexican war and just prior to the discovery of gold, the Russian Admiral, Wrangel, was sent out to examine the country and report upon its value, with the view perhaps, of asking a compensation for the lands ceded. The Admiral reported the country of "no value," and the Russians sold out for a song to private parties, the pioneer Sutter being the principal purchaser of the crops and cattle. This grant of land faced for many leagues along the Pacific Coast, immediately in front of the richest gold mines in the world, discovered only a few months after the transfer of the territory. Mount St. Helena was the great land-mark by which the Russians located their grant, and until within a few years a copper tablet on its summit recorded a visit of the Russian officers to this mountain. Its primitive Indian name was "Mallacomes," so named by the Indians in memory of a departed Chief of the "Moristul" tribe. The Russian Admiral changed its name to St. Helena, in honor of Helena, the mother of Constantine the Great.

### **The Great Geysers.**

Justly celebrated among the natural wonders of California, the Great Geysers constitute the principal point of attraction in this region. They are reached via Calistoga—tourists from San Fran-

cisco generally passing the night here and starting early the next morning by Foss & Connelly's famous line of six-horse stages. The thousands who have visited the Great Geysers are unanimous in their enthusiasm as to the exciting drive over the road leading through scenery of the most wild, grand and picturesque character, and the ride is memorized as an event in a lifetime. The admirable sketch hereto appended, by J. F. Manning, gives a very faithful and graphic description of the trip.

### **The Clear Lake Country.**

Thirty-two miles from Calistoga, by an excellent turnpike road, is situated Clear Lake, a romantic and beautiful sheet of water thirty miles in length and from three to ten in width, surrounded by bold mountain peaks and bordered by fertile farms. Lakeport, the county seat of Lake County, is on the western bank of the lake, and Lower Lake—the agricultural headquarters of this portion of the valley near its southern extremity. From the last named town there is a very pleasant ten mile drive to Borax Lake and the Sulphur Bank. Clear Lake is the source of Cache Creek, which, flowing through a portion of Lake and Yolo Counties, sinks in the plains near the confluence of the Sacramento and Feather Rivers. The County is noted for the excellence of its butter, cheese, hams and bacon. The raising of grain has now become the principal industry, which is rewarded by uniformly large crops. Lake County as well as Sonoma, Napa and Mendocino, has never suffered from drought. Environed by mountain ranges these counties are visited by rains more regularly and frequently than in the middle and southern ones. There is a stage line between Calistoga and Clear Lake, the coaches leaving three times a week, and trips will soon be made daily. The route is one of the most interesting in the State, passing through a rich and productive agricultural district, and including springs of borax, sulphur, soda, iron, magnesia and salts, some of which boil up from the bottom of the Lake three feet above the surface of the water. There are facilities for boating, fishing and hunting at Lakeport, where ample accommodations are prepared, and the most careful attention given to visitors.

## A Scene of Rural Industry.

Looking northward from the verandah of the hotel at Calistoga Springs, with the towering Mount St. Helena as a back-ground, the intervening country presents a succession of orchards, vineyards, pastures and grain fields. As early as the second week in June the wheat stands four feet high, extending in hundreds of acres of undulating billows of the richest green, bending gracefully in the breeze, while here and there patches of a deeper shade show where the grain is beginning to turn, and is approaching the period of fullness. It is a sight to gladden the eye of the farmer, and impress the tourist with the agricultural wealth of the Golden State. No fly nor smut destroys the hopes of the husbandman in this favored valley; and what is still more remarkable, the seasons of drought, which in some years cause a failure of crops in other parts of California, are here unknown. Half a mile from Calistoga Hotel is the scene of the mulberry culture, and every condition of this interesting branch of industry is in full success. In other directions the beet is being cultivated on an extensive scale, for the manufacture of sugar. The Cinchona, or Peruvian Bark tree; the Japanese tea tree; the Ramie plant, and other equally valuable productions are already past the experimental era, and are in full and flourishing growth. Here and there, dotting the sunny landscape, herds of milch cows appear, indicating where is conducted a thriving dairy. In other localities rows of beehives show where the rich honeycomb of the San Francisco markets has its origin. An interesting experiment is being made for the formation of a natural conservatory, or vegetable and floral forcing-garden, for the raising of asparagus, green peas, bush-fruits and berries, and the tender esculents, for winter consumption in San Francisco. The tract includes about twenty acres, located in rich loam, under which, at a depth of a few feet, is perpetual hot water, thus preserving even temperature for the forcing of all out-of-season produce, which can be sent to market via the Napa Valley Railroad in from three to four hours. If successful this will be a novelty in agriculture, and may be increased indefinitely. The whole of this scene, a land literally flowing with milk and honey, is dimpled amongst the picturesque hills of the interior amid scenery as romantic as the most devoted lover of nature could desire.

## **The Hotels.**

The Calistoga Springs Hotel and the pretty cottages which are connected with it, has accommodations for about two hundred guests. It is under the supervision of E. B. Badlam, the present lessee, who is ever watchful for the comfort of his visitors, and conducts the establishment with the most approved modern appliances.

## **The Proprietor of Calistoga.**

The task of evoking this scene of industry and pleasure out of primitive nature, is mainly attributable to an early pioneer in California, Mr. Brannan; or rather it might be credited more appropriately to the touch of the magician's wand. Returning from an extensive European tour, in which he had visited most of the German, French and Italian watering-places, he conceived the idea of making Calistoga equal to them in attractiveness, as it undoubtedly surpasses them in natural charms. For ten years the beautifying and improving of this "Saratoga of the Pacific" has been his principal object. The importation of costly varieties of vines, fruit-trees, shrubbery, and the finest breeds of sheep and cattle; the opening of roads in all directions; the establishing of a telegraph line to his office in San Francisco; the erection of hotels, stores, mills, depots and aqueducts; in short, the building of a town with his own unaided means, are among the results of the restless energy of one man. The lands of Calistoga exceed two thousand acres. They are truly a Principality—a domain which might well gratify the aspirations of the most ambitious.

## **The Town of Calistoga.**

The little town of Calistoga adjoins the Springs, as shown in the accompanying illustration. It now contains about four hundred inhabitants, but as it is the terminus of the railroad, and all the wagon roads centre there from the different agricultural valleys in this region, it is destined to become an important distributing point. The town and Springs are supplied with an abundant flow of pure







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*Page 11.*

fresh water, by pipes leading from a never-failing mountain source. The entire enterprise was conceived and executed by the proprietor at his own expense. There is not only water enough for a population of several thousands, but also an ample supply for irrigating purposes and fountains.

### **The Vineyard and "Grape-Cure."**

Not far from the Springs Hotel is one of the largest and finest vineyards in the State, covering many acres, and filled with the choicest European and American varieties. This is a favorite resort for the "Grape Cure," in the season, as practiced with remarkably successful results in Germany. Numerous complaints are known to yield readily to the persistent eating of ripe grapes. The guests wander at leisure through the immense vineyard, plucking the luscious fruit, and carrying with them to the hotel baskets loaded with white, crimson and purple clusters. The "Grape-Cure" is decidedly popular at Calistoga, and finds very willing converts, being a remedy which, unlike many in the pharmacopœia, is *not* worse than the disease. Here is manufactured great quantities of pure wine and brandy from grapes, which liquids are evidently unadulterated, as the process may be witnessed at an extensive distillery a short distance from the Springs.

### **Baths and General Attractions.**

There is no lack of amusement at Calistoga Springs. The country for miles around abounds in the most enchanting drives, under the shade of the oak-openings and around the beautifully wooded hills in the vicinity. Well regulated livery stables afford every variety of vehicle, and excellent saddle horses. The pleasures of mineral-water bathing, are here enjoyed to perfection. There are baths of all temperatures, dozens of them, from cold to scalding hot, by which last, eggs are boiled, and combining medicinal virtues applicable to every ill that flesh is heir to. These include ophthalmic springs for the cure of diseases of the eye; hot mud baths (similar to those of Pavia in Italy) for rheumatism and other complaints, as used by the Indians and native Californians in early times; chemical, swimming and steam baths, and other varieties, as elsewhere more particularly described. An experienced physi-

cian is always in attendance. A newspaper—the “*Calistoga Tribune*,” is published weekly at the Springs, with the names of all visitors, and the current news of the day, Local, State, Eastern and Foreign, and containing articles on the general resources of the State. One of the attractions about the grounds is a spacious ornamental aviary, built on the lawn in front of the hotel, where will be gathered every species of the native wild birds of California. These will include a very large variety, many of them of the most beautiful plumage. Among the principal birds of this region are the robin, meadow-lark, finch, yellow-hammer, wood-pecker, black-bird, blue jay, humming bird, sparrow, mourning dove, blue bird, linnet and thrush. To add to the pleasure of the guests, there is a large, well-appointed skating-rink, a natural steam-cooking spring, hunting grounds, an endless growth of roses and all garden flowers, and avenue drives of some seven miles on the premises.

### **The Petrified Forest and Grotto.**

Near the hotel, and forming an interesting study for the scientist, is the petrified grotto, built entirely of the trunks and limbs of trees brought from the above named forest, situated in the adjacent mountains. The grotto, which is in the form of a Druidical Temple, is about fourteen feet high by twenty-five in circumference. Much has been written concerning the origin of the wonderful forest, which (for want of a better theory) may have been submerged in distant ages, by the eruptions of some volcano, (perhaps Mount St. Helena, elsewhere described in these pages,) which, discharging water and ashes, covered all this part of the country, flowing over the tall forests and sealing them in an eternal tomb. The erosion of countless centuries gradually exhumed and left them in their original form, but turned to stone—every trunk and branch remaining as at the time of the catastrophe. But it is not here proposed to inflict any crude speculations upon the reader. Scientific research is baffled in its attempts to explain this marvel of nature. The visitor, however learned, can only gaze in puzzled silence, and admit his inability to penetrate into the mysteries of the remote past. Prominent among the theories advanced on this subject is an able article by Professor Marsh of Yale College, which will be found in these pages.



*Swimming Bath and Pavilion.*



## **Rural Retirement.**

Calistoga is the place for relaxation of overtasked body and mind. Climate, scenery, quiet, and perfect seclusion from the outer world, all conduce to *Rest*—the great desideratum of weary, hard-working men. Here luxurious laziness may be enjoyed, or rather it is cultivated as a science. A notable feature in the climate of Calistoga, is the uniform coolness of the nights, when, after a day passed in hunting, fishing, driving or rambling among the hills and groves, the tired tourist having luxuriated in a delightful, tepid bath, is sure of a good night's rest under enough bed-clothing to make sleep natural and beneficial. No matter how ardent the noonday sun may have been in midsummer, the grateful coolness of the evening and night quickly succeeds and invites to sound and refreshing slumber.

The prospect from the observatory on Mount Lincoln, about 100 feet high, standing near the hotel, takes in glade, dell, meadow, precipitous mountain sides, and masses of dense, tangled wildwood, sheltering many a plumed thing sitting in the leafy stillness.

## **The Swimming Bath.**

It is justly claimed that a warm bath is a luxury, if it is only in a tub; but fancy bathing-tanks forty feet long and wide, and five feet deep, with nice boards for a bottom and steps leading down into them from all sides; every appliance for swimming; room to dive and splash about in sparkling waves of delightfully tepid water, whose every drop as it purls around you, bears comfort and healing. It enters on one side, bubbling copiously up, warm from its mysterious subterranean source, medicated by the hand of Dame Nature, and flows out on the other, thus ever renewing itself in crystal purity. Add to this, pyramids of towels fresh from the natural boiling laundry close at hand, and large light and airy buildings, with an atmosphere softened and tempered by the unceasing evaporation, and one may almost picture himself in some scene of magical delights, or Elysium of Oriental story.

### **Trout Ponds.**

The raising of trout is being successfully prosecuted in the vicinity, by Messrs. Badlam & Conwey. Their fish ponds, containing some ten thousand trout, are visited as one of the great attractions of Calistoga. Several varieties, including those brought in spawn from New York and from Lake Tahoe, have been added to the native fish taken from the neighboring streams. The ponds are divided into compartments for separating the different sizes, to protect the smaller from the larger and more rapacious of their kind. The motions of these "speckled beauties" can be plainly viewed through the waters of the mountain torrent that feeds the ponds. After the present year the tables at the Calistoga Hotel will be supplied from this source.

### **The Quicksilver Mines.**

A number of valuable quicksilver mines have been discovered and are now being profitably developed in the region around the base of Mount St. Helena, in Cobb and Pope Valleys, at Pine Flat, on the Great Geyser Road, and near Lillie's Mill, on the Clear Lake Road. They are from ten to sixteen miles beyond Calistoga, through which their products reach San Francisco. The deposits of cinnabar occur in well-defined veins, and, as they are now being scientifically developed, they bid fair to rival in productiveness the celebrated mines at New Almaden.

### **Calistoga in Olden Times.**

Prior to the gold discovery, Calistoga was a favorite resort of grizzly bears; and even now they sometimes descend from the mountains, and are tracked through the mud bordering the streams that rise in Mount St. Helena and the adjacent ranges. During the summer heats they were seen wallowing like hogs in the mire produced by the drainage of the Springs, or stretching their cumbersome bulk in the grateful coolness of the pools, with huge



grunts and yawns of satisfaction. Of shooting and fishing there is no end—deer, quails, rabbits and the like among the hills, when the game law is not in force, while the brooks abound in speckled, or, as they are sometimes called, “mountain trout.”

## Settlement of the Valley.

It was not until the first half of the present century, that Napa and Calistoga valleys began to be settled by the Latin race, immigrating from Mexico, and now and then a trapper or hunter from across the continent. The country from time immemorial had been in the undisputed possession of Indians and wild beasts. The first settler in Napa Valley was the pioneer Yount, who received a grant of two leagues of land from the Mexican Government, about the year 1834. From the time of his taking possession until nearly the outbreak of our Mexican war in 1846, the old frontiersman, shut up in this remote solitude, had occasional combats with his savage neighbors, who with hatchet and faggot besieged him in his log hut. His trusty rifle made many of them bite the dust, and gradually his self-imposed authority was fully established. From the time of the first settlement by the Americans, Napa Valley has steadily increased in population and wealth and is now the chosen country abode of many of the leading citizens of California, who either reside here on extensive estates or have purchased retreats for future enjoyment. Among the many may be mentioned Gen'l E. D. Keyes, Gen'l John F. Miller, ex-Governor Edward Stanley, Col. J. P. Jackson, (President California Pacific Railroad), Hon. C. Hartson, E. L. Sullivan, S. Brannan, Thos. R. Rutherford, A. Badlam, Nathan Coombs, R. B. Woodward, Wm. Gouverneur Morris, Rev. J. L. Ver Mehr, George Watson, A. Grozenger, H. A. Crane, John McPike, and others. The charm of romantic scenery, unsurpassed fertility, genial climate, and ease of access from San Francisco are the attractions which must always distinguish Calistoga as a favorite resort of the tourist, the home of the prosperous farmer, the healthful asylum of the invalid, and the place of elegant retirement for the opulent man of leisure.

### **The Calistoga Indians.**

One of the villages of the Wappoo tribe was at Calistoga, then known as "Carne Humano" (human flesh), a name said to have originated from their eating their captured enemies, a practice which tradition, with more or less accuracy, ascribes to them. The Spanish and Mexican settlers named these springs "Aguas Calientes" (hot waters, or springs.) The present name, Calistoga, signifying warm robe, from Cali, hot, and toga, robe or gown, was given by a gentleman whose health was restored by bathing in its vapor baths, which envelope the person like a warm robe. The remnant of the tribe now numbering, squaws, papooses and all, not more than three dozen, still cling to the scenes of their former possessions, and, in a collection of hovels, dignified with the name of village, preserve a jealous seclusion from their pale-faced successors. Most of these little isolated communities maintain a semblance of local government, having each their "Alcalde," and speaking a curious jargon made up of bad Spanish, aboriginal gruntings, and now and then a phrase or two of incomprehensible English. Located in the midst of this most productive farming region of California, their simple wants are easily supplied, and in a few years the last Indian will have passed away, and their very traditions become extinct. Their homes, their hunting grounds and groves will be forgotten—all, except this, their medicinal Mecca. These Springs must ever be remembered while the great laboratory of nature furnishes healing for the million, and pilgrims from all lands will flock hither to enjoy the "warm robes" of health so bountifully supplied by the vapor baths of Calistoga.

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*Chippewas - Indian in Camp*



## NOTICE

OF A

# Fossil Forest in the Tertiary of California.

BY PROFESSOR O. C. MARSH.

DURING the visit of the Yale College Scientific party to the Pacific Coast, in October last, several members of the expedition, including the writer, while on their way from San Francisco to the "Geysers," took occasion to examine a locality, a few miles from the route, where a number of fossil trunks of trees had recently been discovered. This point proved to be of much scientific interest, and since it has received as yet apparently little or no attention from geologists, it may be well to note the more important results of our investigation.

The locality is situated on a high rocky ridge, in Napa county, California, about five miles southwest of Calistoga Hot Springs, and perhaps ten miles south of the summit of Mount St. Helena. The existence at this place of several petrified trunks of trees was first made public by Charles H. Denison, Esq., of San Francisco, who visited the spot in July last, and, soon after, gave a short account of the discovery in the *San Francisco Bulletin*. Our party was especially indebted to Mr. Denison for information on the subject, and for accompanying us to the locality during our first visit. The ridge on which the fossil trees were found belongs to the Coast Range series, and forms the divide between the Napa and Santa Rosa valleys. It is about 2,000 feet in height, and is mainly composed of metamorphic rocks of Cretaceous age,\* which are in places, as we ascertained, overlaid, unconformably, by later Tertiary strata, consisting of light-colored, coarse sandstones, and beds of stratified volcanic ashes. This ridge has long been covered with a dense growth of "chaparral," but just before our visit a destructive fire had swept over a portion of it, rendering it comparatively easy to examine a large tract of country, which apparently had never been explored.

A careful examination of the locality where the first prostrate trunks had been discovered soon made it evident that those now on the surface had all been weathered out of the volcanic tufa and sandstones which form the summit of this part of the mountain ridge. Several large silicified trees were, indeed, subsequently found in the vicinity, projecting from the side of a steep bluff, which had partially escaped denudation. Extending our explorations among the mountains for several miles around, we were rewarded by the discovery of many additional fossil trunks at various points, showing conclusively that this

\*Geology of California, vol. i, p. 85.

Tertiary deposit contained the remains of an extensive forest of very large trees, which had apparently been overthrown and entombed by some volcanic irruption. Portions of nearly one hundred distinct trees, scattered over a tract three or four miles in extent, were found by our party, and the information we received from hunters and others, familiar with the surrounding country, renders it more than probable that the same beds, containing similar masses of silicified wood, extend over a much greater area.

The fossil trees washing out of this volcanic tufa were mostly of great size, and appeared to be closely related to some of the modern forests of the Pacific coast, especially the gigantic Conifers. One of the prostrate trunks examined during our explorations was only partially exposed above the surface, dipping with the strata about  $10^{\circ}$  to the northward. Its accessible portion, evidently but a small part of the original tree, measured sixty-three feet in length, and, although denuded of its bark and very much weathered, was over seven feet in diameter near its smaller end. On a high summit about a quarter of a mile west of this point, two other large trunks were found, one about five feet in diameter, lying east and west, with thirty feet of its length above the surface. The other rested directly on this, dipping with the strata to the north. The exposed fragments of this trunk indicated that the tree when standing could not have been less than twelve feet in diameter. These two trees had apparently fallen not far from where they were imbedded, as the bark was well preserved, both on the main trunks and on the small branches, numerous fragments of which were lying near. Many other trees were found, nearly or quite equal to these in size and all those examined indicated a very large general growth for the original forest.

All the trees discovered were prostrate, and most of them, after their petrification, had been broken transversely into several sections, apparently by the disturbance of the enclosing strata. A majority of the trunks had a general north and south direction, probably due to the course of the current that covered them with volcanic material, or perhaps indicating in some cases the position in which they had fallen. Several of the trunks had portions of their roots still attached, and some were evidently much decayed internally and worm eaten before their entombment. All the fossil wood observed was silicified, probably by means of hot alkaline waters containing silica in solution, a natural result of volcanic action, especially when occurring in connection with water, as was evidently the case in the present instance.

The trees closely examined appeared to be all conifers, and in their external characters, especially in the bark, mode of branching, and general habits of growth, most nearly resemble the modern redwoods, still flourishing in the same region. Dr. M. C. White, of New Haven, an authority in such matters, has, moreover, kindly made a microscopical examination of some of the best preserved specimens collected at this locality by the writer, and finds no essential difference between the structure of the fossil wood, and that of existing conifers of the genus *Sequoia*, to which the redwoods belong.

The beds enclosing the silicified wood appear to contain no other fossils, excepting here and there small fragments of charcoal, and hence their exact age is somewhat doubtful. As they rest unconformably on distorted and metamorphic Cretaceous strata, they are apparently as recent as Tertiary, and will probably

prove to be Pliocene. The origin of the volcanic material which covered the forest cannot, perhaps, be definitely ascertained, without a careful examination of the surrounding region. It is not improbable, however, that it came from Mount St. Helena, the nearest volcanic peak, across the now intervening depression. Our party discovered on the western side of the Napa valley, along the base of the ridge, patches of a deposit of stratified tufa and gravel, which was evidently identical with that containing the fossil trees on the summit. This would seem to imply that the upper portion of the valley had once been filled with these peculiar beds, and, through their denudation, gradually attained its present proportions. However that may be, this volcanic deposit and its contents is certainly of great interest, even in this land of geological wonders, and is well worthy of a more systematic exploration than we were able to give it in the limited time at our command.

Yale College, New Haven, February 10th, 1871.

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## “AIR AND SUN BATHS.”

Blest power of sunshine! genial day,  
What balm, what life are in thy ray:  
To feel thee is such real bliss,  
That, had the world no joy but this,  
To sit in sunshine calm and sweet  
It were a world too exquisite  
For man to leave it for the gloom,  
The deep, cold shadow of the tomb.—[MOORE.]

The warm, genial sunshine at Calistoga, which bathes all the landscape from a sky of almost perpetual blue, suggests the important subject of “Sun-baths.” More attention has lately been paid to the effect of sunlight in health and disease than for some years previously. When sunshine is decomposed by means of the prism, the actinic rays, or those which produce chemical effects, such as the taking of the photograph, etc., are found to reside in the blue portion. Some very interesting discoveries have lately been made in regard to the actinic power of the sun, in the persistent action of light. It has long been known that some substances, such as the diamond, the sulphide of barium, etc., after having been exposed to bright sunlight, have the power of giving out that light when carried into a dark place. This has been called phosphorescence. Lately it has been ascertained that certain substances have the power of storing up the chemical or actinic force of the sun, after having been exposed to his rays, and of giving it out even when placed in the dark. Strips of ordinary paper were covered with strips of colored glass, which represented the colors of the solar spectrum, and exposed to sun light. Afterwards the paper alone was removed to the dark, and placed over other strips of paper which were sensitized with chloride of silver. After a time the silvered paper was blackened in the dark by the strips of common paper that had been covered in the sunlight by the blue, indigo and violet glass. It is proposed to call this actinescence. This is a very important discovery, as all the functions of animal and vegetable life depend upon this force. Porous and rugous substances, pasteboard among them, were found to possess this property of actinescence. Why may not the skin have the same property, and after being exposed to the light be capable of exerting this chemical force, even after the sun has set? Certain articles of clothing, too, may possess it, while others may not. Further investigation will bring to light many important truths.

The following by an eminent physician, more fully explains this important subject:

“We have been told by some consumptives that one of the best prescriptions we have made has been their removal from a north room to the sunny south chamber. As we write, two cases come to mind, strikingly illustrative of the sun’s benign influence. We had been attending, at an orphan asylum, a girl about twelve years old, who had been long ill of severe typhoid fever. She was wholly prostrated in mind and body, and emaciated to the last degree. It was plain that she was falling into that depressed condition of all the powers of life that so



often precedes consumption. Day after day we visited her, but all recuperative power seemed lost. Half dead and alive, the little creature neither spoke nor moved, and ate only on compulsion. One day, on our way to visit her, we felt that elastic thrill which the warm rays of the sun impart in the early cool weather of spring. We involuntarily leaped along, and were instantly struck with the fact that 'virtue had gone out of us,' when we left behind us the sunlight and warmth of the street, and entered that northern chamber, the dormitory of the poor orphan. That inspiring influence the invalid had not experienced in the slightest degree during the whole of her sickness, as, owing to its peculiar situation, not a ray of direct sunlight had ever entered the chamber. We were shocked, and for the first time considered the depth of her loss, and our own remissness in regard to her. The air of the room had been pure, the ceilings of the infirmary were lofty, the attendants had been faithful and sagacious. Nothing seemed lacking, in fact, to restore health. Yet it did not come. On the contrary, there seemed to be a constant downward tendency. 'A sun-bath in the warm rays of this delicious spring day is what this girl needs,' we instantly said to the sister superior. This lady gladly consented to the change, and placed the patient in another room having a southern aspect, and consequently filled with sunlight. The invalid immediately recognized the change, and asked, in her weak way, to have the curtains raised, so as to let in the full blaze of the light. Soon she wanted to sit up, and directed that the easy chair, in which she was propped, should be so placed as to allow her face to be exposed to the direct rays of the sun. It was the natural tendency of disease, seeking for all life-renovating influences. And we have never met with so marked or so rapid improvement as immediately began in the body and mind of the girl. Appetite and strength increased daily, and with them burst forth again all the joyousness of the child's heart.

"Another analogous case, which, although we do not demonstrate by it the influence of the sun alone, we cannot forbear to name, because by such examples we impress, perhaps, on the minds of our readers the real principles underlying the whole question. A lady aged about thirty, resident in the northern part of New England, consulted us for undoubted tubercular disease of the lungs. Her house was well situated, and on the side toward the south was a small piazza resting on stone steps, which was raised two or three feet above the ground. The winter was approaching and rules were to be given. Having full faith in these divine influences of pure air and sunlight, we directed that she should sit out on this piazza every day during the winter unless it was too stormy. It was so arranged as to shut out the cool air on three sides, and to admit the full blaze of sunlight in front. Here, according to our directions, she used to sit, wrapped in furs, reading or writing for several hours each day during the following winter, and with most excellent results. She was directed frequently to make deep inspirations, in order to fill the lungs with pure air. She was never chilled, because the sun's rays and her warm clothing prevented it. She never 'took cold' there. On the contrary, the balmy influences exerted upon her by her daily sun and air bath were so grateful, her breathing became so much easier after each of them, that, whenever a storm came and prevented the resort to the piazza, the invalid suffered in consequence thereof. Whether these remarks will prove to our readers that want of sunlight may be reckoned among the causes of consumption may well be

doubted, but we trust that, at least, they will convince some skeptics, that sunlight has a potent influence in raising the human body from various weaknesses that sometimes are the precursors of fatal phthisis."

How many young ladies there are who entertain false impressions, or no impressions at all, in regard to this subject. They are fearful that the sunlight may effect their skins badly, and so keep themselves shut up in the house, when in fact they are pursuing the course that ultimately establishes what they wish to avoid. Too much confinement to the house will produce a faded appearance, and cause the skin to assume that sickly hue, only to be seen in those who are too much out of the bright sunlight. Exercise in the open air at all seasons, expose the face freely to the sun and air—to the direct rays of the sun—and when indoors let the blinds be kept open, that the light of heaven may exercise its benign influence. Attention to these things, among others, is one reason why English ladies, as a general thing, have a superior physique to American.

This subject of hygiene in all its branches is so voluminous, and so vital to mankind, that on the one hand it is impossible to treat it as it deserves in these few pages, and on the other, equally impossible to err in any truth presented on this subject, as far as its absolute benefit to the community is concerned. The importance of "Sun-baths," cannot be over estimated. It is not enough that the *light* of the sun reaches you; the *direct rays of the sun must fall upon the body*, be absorbed by the clothing, and penetrate the system. We, all live too much in the shade. A plant placed in a cellar, will become sickly and pale, and if there be a stray gleam of sunshine entering by any hole or window, instinctively every leaf and twig will grow in that direction, and reach out toward the cheerful rays. All nature imperatively demands *sunshine*. The sun is the source of heat, and light and life to all beings and things; deprive them of it for any length of time, and they die. All modern science tends to make the sun the centre of force and life to vegetables and man. The Ancients understood this better than we, for they had their *solaria* on the house-tops where they could enjoy in quiet, their "Sun-baths." Some physicians always make a point of selecting the sunny side of the street to walk on, the sunny side of a house to live in, and keep sunshine constantly in view for themselves and their patients, as an all-essential health-promoting element.

If it is true that "there is nothing new under the sun," then there are a great many valuable facts that have been buried from our sight for a long time, and are just now being dug up and renovated—a sort of intellectual Herculaneum. Every day witnesses some fresh discovery, and every day mankind is presented some valuable idea. Let the diggers be encouraged, and the digging go on; the mine will never be exhausted, but will continue to reward patient workers in all time to come, as it has in all time past.

## DISTANCES FROM CALISTOGA.

	MILES.
Petrified Forest.....	5
McDonald's Creek.....	8
Pope Valley, (by horse trail).....	8
St. Helena, town, (by rail).....	9
Mountain Mill Creek.....	10
Santa Rosa.....	12
Summit of Mount St. Helena.....	12
White Sulphur Springs, (by rail).....	12
Pope Valley Quicksilver Mines, ("Eureka," "Phoenix," "Washington," "Valley," "Red-Hill," "Mammoth.")....	12
Howell Mountain.....	12
Sonoma, (by horse trail).....	14
Oakville Quicksilver Mines, (by rail).....	15
Sulphur Bank.....	15
Harbyn Springs.....	17
Cobb Valley.....	20
Healdsburg.....	22
Great Geysers, (by Foss & Connelly's Six-Horse Stages)....	26
Napa City (by rail).....	26
Lower Lake.....	32
Skaggs' Springs.....	34
Cloverdale.....	36
Kelseyville, (Cobb Valley).....	36
Lakeport.....	40
Borax Lake.....	42
Vallejo, (by rail).....	42
Upper Lake.....	52
Bartlett Springs.....	60
Ukiah, (County Seat of Mendocino), via Lakeport.....	65
" " " " via Cloverdale.....	71
Sacramento, (by rail).....	88
Marysville, (by rail).....	118



# CALISTOGA SPRINGS

(OR, LITTLE GEYSERS,)

**E. B. BADLAM, - - - - - Lessee.**

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## EVERY FORM OF ILLNESS

**YIELDS READILY TO THE MARVELOUS CURATIVE PROPERTIES OF THESE WATERS.**

Invalids have been restored to health and activity by a few days' bathing and drinking at the Springs, which are classed as follows :

*HOT SULPHUR AND CHEMICAL BATHS,*

*MEDICATED STEAM BATHS.*

(BY INHALATION.)

*HOT IRON AND MAGNESIA BATHS,*

*HOT MUD BATHS,*

(ITALIAN STYLE—AN INFALLIBLE CURE FOR RHEUMATISM.)

*WARM SULPHUR SWIMMING BATHS,*

(A GREAT LUXURY, AND ON AN EXTENSIVE SCALE.)

*RUSSIAN AND TURKISH BATHS*

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## THE SCENERY AND CLIMATE


At Calistoga are unsurpassed ; the table at the Hotel is bountifully supplied with the best the market affords ; and facilities are always ready for **DRIVES AND HORSEBACK EXERCISE** over the most

## PICTURESQUE AND ROMANTIC ROADS, TO THE GEYSERS, CLEAR LAKE

And the surrounding country : and no pains are spared by the lessee to insure the comfort of guests, and to maintain the reputation of Calistoga as the

## FAVORITE PLACE OF RURAL RESORT IN CALIFORNIA.

Trips by Steamboat and Railroad are made twice a day from San Francisco, via Vallejo, and Napa Valley ; the time from San Francisco to the Springs being four hours : and from four to five hours from Sacramento, Marysville and Stockton.

 The Hotel will be open during the winter for visitors and families at reduced prices.

**TOWN LOTS FOR SALE FOR PRIVATE RESIDENCES.**

THE  
**GREAT GEYSER SPRINGS**

OF

CALIFORNIA.

These celebrated Springs are the greatest natural curiosity in the world, and are reached by the way of

**NAPA VALLEY AND CALISTOGA SPRINGS.**

The Steamer *Capital* leaves San Francisco for Vallejo every morning and afternoon, and connects with the cars of the California Pacific R. R. Company for Calistoga.

**Foss & Connolly's Celebrated Six-Horse Stages**

leave Calistoga every morning for the Great Geysers.

The traveling time is from eight to nine hours from San Francisco to the Great Geysers.

The medicinal and curative properties of the Great Geyser Springs are admitted to be equal, if not superior, to Saratoga, Baden-Baden, Aix la Chapelle, Weisbaden, or Homburg. The scenery is wild, picturesque, and grand in the extreme, and finer than that of the lower Alps.

The Pluton, or Great Sulphur Creek, which runs by the Geyser Hotel, is well supplied with mountain trout; and the hills abound with deer and other game. Do not suppose that desolation, fire and brimstone reign supreme: one of the wonders of the place is that grass, shrubs, and huge oak, pine, sycamore, willow, alder, laurel and madrone trees grow all over the hills, and in many places overhang the seething cauldrons below.

The Hotel is a large, two-story building, with spacious verandahs surrounding it, above and below, and has been newly furnished. New steam and sulphur bath houses have been erected, and a large stable has been built. Private teams can easily and safely drive over the new road from Calistoga, and at the great Geysers will find an abundance of good feed for their horses.

Saddle horses for ladies and gentlemen are always on hand, at reasonable prices.

A good table is kept at the Hotel, and the best of liquors and cigars will be found at the bar. The rooms are comfortable, and the beds are all new and provided with spring mattresses.

Early in the morning, before sunrise, is the proper time for visiting the Geyser Cañon. It having cooled off during the night, the trip through it can be made with comparative ease and comfort; and hundreds of steam jets, which during the heat of the day cannot be seen, make a fine display.

*CL*  
**J. C. SUSENBETH.**  
*City*













